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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,238

01/03/2006

Masayuki Uda

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07/23/2007

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EXAMINER

MIDKIFF, ANASTASIA

ART UNIT

PAPER NUMBER

2882

MAIL DATE

DELIVERY MODE

07/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,238

Applicant(s)

UDA, MASAYUKI

Examiner

Anastasia Midkiff

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent to Ciccarelli et al. (US 4,263,510) in view of U.S. Patent to Das Gupta et al. (US 3,440,419).

With respect to Claims 2-4, Ciccarelli et al. teach an energy dispersion type x-ray diffraction/spectral device (Column 4, Lines 12-35) comprising:

- a white x-ray generating means (22);
- an x-ray detecting means (26);
- a specimen support (12, 14, 18) interposed between said white x-ray generating means and said x-ray detecting means (Figure 1), said specimen support having positioning members (30, 32, and Column 4, Lines 18-19) which are capable of positioning said white x-ray generating means and said x-ray detecting means relative to each other in either a first position or a second position (Figures 3 and 4, and Column 4 Lines 36-50);
- a data processing means (Column 4, Lines 29-30) for obtaining and analyzing fluorescent and diffracted x-ray spectra collected in various

relative positions of the sample, detector, and source (Column 4 Lines 26-35, and Column 6 Lines 32-36).

- wherein said data processing means obtains intensity data for each level of energy at the first position to obtain first data and at the second position to obtain second data (Column 4, Lines 24-50);
- wherein said data processing means obtains third data which is data regarding diffracted x-rays and is based on a difference between said first data and said second data (Column 4, Lines 29-35);
- wherein said data processing means obtains data regarding fluorescent x-rays from the difference between the first or second data and third data (Column 4, Lines 29-35).

Ciccarelli et al. does not teach that the positioning members positioning said source and detector operate without the use of a goniometer or specimen rotation mechanism.

Das Gupta et al. teach a combined x-ray fluorescence/x-ray diffraction apparatus (Title) wherein an x-ray source (62) and x-ray detector (56) are positioned relative to each other by means of an arm support (50) attached to a sample holder (44) through a gear and plate arrangement (48, 46, 42), so that both fluorescence measurements and diffraction measurements may be taken of a sample that is maintained in a fixed horizontal position (Column 1 Lines 55-60 and Column 3 Lines 33-74).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ a source/detector positioning means on a fixed sample support in

the apparatus of Ciccarelli et al., to allow combined fluorescence and diffraction measurements to be taken of a sample in a single device without the difficulties of containing and/or disturbing powder and liquid samples during examination, as suggested by Das Gupta et al. (Column 3, Lines 58-62).

Response to Arguments

Applicant's arguments with respect to claims 2-4 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

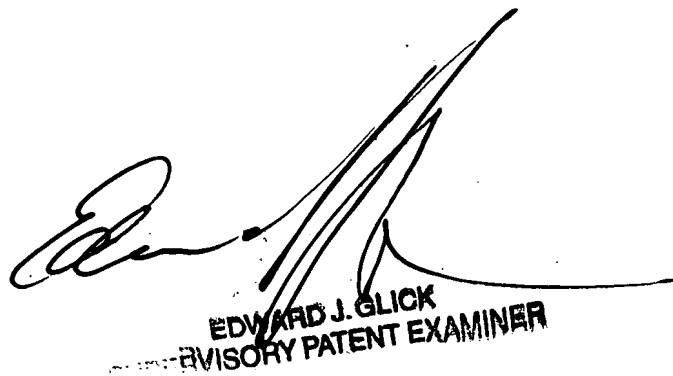
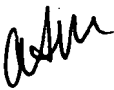
U.S. Patent Documents to: Herbstein et al. (US 3,903,414), Kirkendall et al. (US 3,920,984), Usui et al. (US 5,369, 275), von Alfthan (US 6,285,734 B1), Tamura (US 6,885,727 B2), and Uehara et al. (US 2004/0109534 A1) regarding combined XRF/XRD apparatus; to Marten et al. (US 4,358,854) and Ferrandino et al. (US 2002/0057759 A1) regarding sample/source/and detector movement devices in X-ray fluorescent apparatus; and to Blake et al. (US 5,491,738) regarding data handling methods for x-ray fluorescent/diffraction data obtained by x-ray apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anastasia Midkiff whose telephone number is 571-272-5053. The examiner can normally be reached on M-F 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASM
7/16/07



EDWARD J. GLICK
SENIOR ADVISORY PATENT EXAMINER